

DUTY STATEMENT

Classification: Mechanical Engineer	Position No. 8200-3583-001
CBID: R10	Office: Demand Analysis
Date Prepared: October 10, 2014	Division: Energy Assessments
KEY: (E) IS ESSENTIAL, (M) IS MARGINAL	

The Mechanical Engineer is under the direction and supervision of the Energy Commission Supervisor II (FO) in the Data Analysis and Survey Unit of the Demand Analysis Office of the Energy Assessments Division. The incumbent has a high level of knowledge, motivation, skill, and ability that is at the journey level and will utilize mechanical engineering knowledge and expertise in working with the data collection project manager to perform data collection, survey design, and survey monitoring including development and implementation of commercial and industrial data collection, contract management, and responding to data requests. The Mechanical Engineer will perform data collection, survey design, and survey monitoring including development and implementation of commercial and industrial data collection, contract management, and responding to data requests.

As the sole engineer in the unit, the incumbent will perform detailed energy consumption engineering analyses, design and validate mechanical system data collection methodologies, assist with the development of building envelope characterization for a wide variety of commercial and industrial sectors and building types, and identify opportunities to improve the characterization of mechanical system energy consumption. The incumbent will be relied upon to ensure survey and broader data collection efforts meet the needs of the commercial and industrial end-use forecasting models which will involve evaluating characterizing the energy consumption of electricity and natural gas in industrial and commercial buildings. The incumbent will need to evaluate building design and layout and the implication on heating, cooling, and process related energy consumption. As the survey efforts will focus on statewide energy characterization end-uses will include pumps, piping, refrigeration, pressure tanks, steam generation, heat transfer, and other building construction and appliance elements.

WORKING CONDITIONS: The work is primarily performed indoors in an office and meeting-room setting, and involves sitting, standing, and walking. Travel may be necessary to audit contractor work, oversee mechanical system data collection activities, participate in training, and attend workshops, hearings, and meetings away from the Energy Commission's headquarters. Additional hours beyond an eight-hour workday or a forty-hour workweek may be required.

DUTIES AND RESPONSIBILITIES:

- 20% Work with the data collection project manager to independently conduct engineering analysis of mechanical systems, oversee the development of survey methodologies to characterize energy consumption of commercial and industrial sectors including motors, heating, ventilating, air-conditioning, refrigeration, plumbing, pumping, water supply and steam generating plants. The incumbent will plan and design new data collection procedures and ensure the data is collected in the most efficient manner, leveraging technologies and evaluating new methodologies and collaborative opportunities for data collection. (E)
- 20% Work with other data collection staff on data collection governance and oversight activities including determining the source of commercial and industrial data issues and design specific

corrective actions to improve data quality and characteristics. The incumbent will monitor corrective actions and ensure the implementation results in commercial and industrial data quality improvements. Additionally, the incumbent will assist with data governance activities including: designing metrics, identification, tracking, and prioritization of commercial and industrial system data quality issues. The incumbent will review and confirm the accuracy of commercial and industrial input data used for forecasting. The incumbent will assist with the identification and evaluation of new commercial and industrial data sources, data collection methods, and identify other strategies to improve data quality. The incumbent will manage or assist in managing contracts related to commercial and industrial sector studies including potential motor studies, broad energy characterization studies, and energy consumption allocation methodologies. (E)

- 15% Provide input into the unit data quality activities involving the commercial and industrial data quality measures, commercial and industrial mechanical system data collection strategies, development of representative sampling strategies, and authoring procurement documents to support data quality objectives. The incumbent will be responsible for working with staff to author data quality procedures and methodologies for commercial and industrial sectors focusing on ensuring representative characterization of mechanical system and building energy consumption. The incumbent will ensure commercial and industrial forecast data is in a format that can be used and/or prepare responses to data queries. (E)
- 15% Oversee data quality and compliance with survey plan for commercial and industrial sector survey activities and actively manage contractor commercial and industrial data collection. The incumbent will perform audits and site visits during onsite data collection to ensure data collection methods are appropriate and that contractor staff are correctly capturing energy consumption. The incumbent will participate in surveyor training activities and review contractor proposed data collection methodologies for building and mechanical systems including shell and envelope permeability, motors, heating, ventilation, refrigeration, and manufacturing and production systems to ensure data quality is maintained. (E)
- 15% Assist other Demand Analysis Office staff with commercial and industrial-related analyses including the impact and benefits of the data on demand forecast disaggregation, energy efficiency impacts, market potential analyses, building standard impacts, and appliance standard impacts. The incumbent will ensure the data transformation activities are implemented appropriately and maintain data quality for all analytical purposes. (E)
- 10% Present and provide a supporting role in workshops, hearings, conferences, and meetings regarding data collected and any reports produced using the data. The incumbent will collaborate with Energy Commission staff on commercial and industrial energy consumption activities, when appropriate. Provide well-written and concise reports and/or technical papers that present the data to staff, Commissioners, and other governmental agencies. (M)
- 5% Perform other duties as required consistent with the specifications of this classification. (M)

SIGNATURES			
I Certify That I Am Able To Perform, With Or Without The Assistance Of A Reasonable Accommodation, The Essential Job Duties Of This Position			
<div style="border-bottom: 1px solid black; height: 20px; margin-bottom: 5px;"></div> <div style="display: flex; justify-content: space-between;"> Employee Date </div> <div>Mechanical Engineer</div>	<div style="border-bottom: 1px solid black; height: 20px; margin-bottom: 5px;"></div> <div style="display: flex; justify-content: space-between;"> Andrea Gough Date </div> <div>Energy Commission Supervisor II (FO)</div>		